Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1. (Currently amended) A recombinant ~~gram-negative enteric~~ bacterium selected from the group of species consisting of *Escherichia coli* and *Salmonella enterica* that displays on its surface a binding moiety that acts as a receptor mimic, the binding moiety being a receptor mimic of a receptor for a toxin of a pathogenic microorganism or an adhesin of a pathogenic microorganism, wherein the binding moiety consists of an oligosaccharide which comprises a sugar residue that is attached to an acceptor moiety by a glycosyltransferase that is encoded by an exogenous nucleic acid which is present in the bacterium, said oligosaccharide forming part of a lipopolysaccharide molecule.

2. (Cancelled)

3. (Previously presented) The recombinant bacterium of claim 1, wherein the oligosaccharide further comprises at least a second sugar residue that is attached to an acceptor moiety by at least a second glycosyltransferase, the second glycosyltransferase being encoded by a second exogenous nucleic acid which is present in the bacterium.

4-7. (Cancelled).

8. (Previously presented) The recombinant bacterium of claim 1, wherein the toxin is an enterotoxin.

9. (Previously presented) The recombinant bacterium of claim 1, wherein the toxin is selected from the group consisting of shiga toxins, clostridial toxins, cholera toxins, *E. coli* enterotoxins, and Staphylococcal enterotoxins.

10-14. (Cancelled)

15. (Previously presented) The recombinant bacterium of claim 9, wherein the toxin is selected from the group consisting of cholera toxin, *E. coli* heat labile enterotoxin types I and II, and ST toxins.

16-36. (Cancelled).

37. (Previously presented) The recombinant bacterium of claim 1, wherein the binding moiety comprises an oligosaccharide selected from the group consisting of

Galα[1→4]Galβ[1→4]Glc,

Galα[1→4]Galβ,

GalNAcβ[1→3]Galα[1→4]Galβ[1→4]Glc,

Galβ[1→4]GlcNAc,

Galα[1→3]Galβ[1→4]Glc,

Galα[1→3]Galβ[1→4]GlcNAc,

Galβ[1→4]GlcNAc β[1→3]Galβ[1→4]Glc,

Glcα[1→6]Glc,

Glcα[1→6]Glcα[1→6]Glc,

NeuNAc,

Galβ[1→3]GalNAc β[1→4]Galβ[1→4]Glc,
|
NeuNAcα[2→3]

Galβ[1→3]GalNAcβ[1→4]Galβ[1→4]Glc,

GalNAcβ[1→4]Gal,

GalNAc,

Gal,

NeuGc→GM3, and

NeuNAc→GM3.

38-40. (Cancelled)

41. (Previously presented)The recombinant bacterium of claim 37, wherein the binding moiety comprises NeuNAc.

42. (Cancelled)

43. (Previously presented)The recombinant bacterium of claim 37, wherein the binding moiety comprises the oligosaccharide:

$$\begin{array}{l} \mathrm{Gal}\beta[1\rightarrow 3]\mathrm{GalNAc}\beta[1\rightarrow 4]\mathrm{Gal}\beta[1\rightarrow 4]\mathrm{Glc}. \\ \qquad\qquad | \\ \qquad\qquad \mathrm{NeuNAc}\alpha[2\rightarrow 3] \end{array}$$

44. (Cancelled)

45. (Currently amended)The recombinant bacterium of claim 1, wherein the binding moiety is a mimic of a natural receptor for adhesins or toxins produced by a micro-organism selected from a group of genera consisting of *Escherichia, Salmonella, Shigella, Citrobacter, Helicobacter, Yersinia, Vibrio, Aeromonas, Campylobacter, Pseudomonas, Pasteurella, Neisseria, Haemophilus, Klebsiella, Staphylococcus, Streptococcus, Clostridium*, rotavirus, and *Entamoeba*.

46. (Previously presented) The recombinant bacterium of claim 1, wherein the bacterium further comprises one or more exogenous enzymes involved in synthesis of a nucleotide sugar which serves as a donor for the glycosyltransferase.

47. (Previously presented)The recombinant bacterium of claim 46, wherein the nucleotide sugar is selected from the group consisting of GDP-Man, UDP-Glc, UDP-Gal, UDP-GlcNAc, UDP-GalNAc, CMP-sialic acid, GDP-Fuc, and UDP-xylose.

48. (Previously presented)The recombinant bacterium of claim 46, wherein the enzyme is a nucleotide sugar synthetase.

49. (Previously presented)The recombinant bacterium of claim 46, wherein the enzyme is involved in synthesis of a nucleotide that comprises the nucleotide sugar.

50. (Previously presented)The recombinant bacterium of claim 46, wherein the enzyme is involved in synthesis of a sugar that comprises the nucleotide sugar.

51. (Previously presented)The recombinant bacterium of claim 46, wherein the one or more sugars transferred to the acceptor molecule by the exogenous glycosyltransferases make up the entirety of the receptor mimic.

52. (Previously presented) The recombinant bacterium as in claim 1, wherein a combination of sugars of the acceptor molecule and the one or more sugars transferred to the acceptor molecule by the exogenous glycosyltransferases make up the entirety of the receptor mimic.

53-56. (Cancelled)

57. (Currently amended) The recombinant bacterium as in claim 1, wherein the acceptor ~~molecule~~ moiety is all or a portion of the core of the lipopolysaccharide.

58-66. (Cancelled)

67. (Currently amended) A pharmaceutical preparation for enteral administration, said preparation comprising a recombinant ~~gram negative enteric~~ delivery bacterium and a pharmaceutically acceptable excipient,

wherein the delivery bacterium is selected from the group of species consisting of *Escherichia coli* and *Salmonella enterica*,

wherein the delivery bacterium expresses one or more exogenous glycosyltransferases encoded by an exogenous nucleic acid and an acceptor molecule,

wherein said one or more exogenous glycosyltransferases are specific for the transfer of one or more sugar residues represented progressively from a non reducing terminal end of a receptor of either a toxin of a pathogenic microorganism or an adhesin of a pathogenic microorganism, and further wherein the one or more glycosyltransferases progressively transfer

said one or more sugar residues onto the acceptor molecule to thereby form a chimeric carbohydrate molecule with an exposed receptor mimic,

wherein said exposed receptor mimic is capable of binding the toxin or the adhesin, and further wherein a combination of sugars of the acceptor molecule and the one or more sugars transferred to the acceptor molecule make up the entirety of the receptor mimic,

and wherein said chimeric carbohydrate molecule is a lipopolysaccharide molecule.

68. (Cancelled)

69. (Previously presented) The pharmaceutical preparation as in claim 67, wherein the receptor mimic is a mimic of the receptor of a bacterial toxin.

70. (Original) The pharmaceutical preparation as in claim 69, wherein the toxin is selected from the group consisting of shiga toxins, clostridial toxins, cholera toxins, E. coli enterotoxins, and Staphylococcal enterotoxins.

71. (Cancelled)

72. (Original) The pharmaceutical preparation as in claim 70, wherein the toxin is a clostridial toxin.

73. (Previously presented) The pharmaceutical preparation as in claim 67, wherein the receptor mimic is partially or wholly formed within a sugar moiety selected from the group consisting of:

Galα[1→4]Galβ[1→4]Glc,

Galα[1→4]Galβ,

GalNAcβ[1→3]Gal α[1→4]Galβ[1→4]Glc,

Galβ[1→4]GlcNAc,

Galα[1→3]Galβ[1→4]Glc,

Galα[1→3]Galβ[1→4]GlcNAc,

Galβ[1→4]GlcNAc β[1→3]Galβ[1→4]Glc,

Glcα[1→6]Glc,

Glcα[1→6]Glcα[1→6]Glc,

NeuNAc,

Galβ[1→3]GalNAc β[1→4]Galβ[1→4]Glc,
|
NeuNAcα[2→3]

Galβ[1→3]GalNAcβ[1→4]Galβ[1→4]Glc,

GalNAcβ[1→4]Gal,

GalNAc,

Gal,

NeuGc→GM3, and

NeuNAc→GM3.

74. (Previously presented) The pharmaceutical preparation as in claim 67, wherein one or more exogenous nucleotide sugar precursor synthesizing enzymes encoded by a second exogenous nucleic acid are also expressed by said delivery bacterium, said sugar precursor enzymes forming precursors to make up said chimeric carbohydrate.

75. (Cancelled)

76. (Previously presented) The pharmaceutical preparation as in claim 67, wherein the delivery bacterium is non harmful and live.

77. (Previously presented) The pharmaceutical preparation as in claim 67, wherein the delivery bacterium is protected by a protective capsule or held within a protective matrix.

78-83. (Cancelled)

84. (Previously presented) The pharmaceutical preparation as in claim 67, wherein the delivery bacterium is killed before administration of the pharmaceutical preparation.

85. (Previously presented) The pharmaceutical preparation as in claim 84, wherein the delivery bacterium is killed by treatment with a chemical agent selected from the group consisting of formalin or thiomersal, or by treatment with a bactericidal antibiotic, or by exposure to heat or UV irradiation.

86-116. (Cancelled)

117. (Previously presented) A recombinant *E. coli* that displays on its surface a binding moiety that acts as a receptor mimic when administered to an animal, and competes with a ligand for binding to a receptor for the ligand, wherein the receptor mimic consists of an oligosaccharide which comprises a sugar residue that is attached to an acceptor moiety by a glycosyltransferase that is encoded by an exogenous nucleic acid which is present in the *E. coli*, said oligosaccharide forming part of a lipopolysaccharide molecule.

118. (Previously presented) The recombinant E. coli of claim 117, wherein the oligosaccharide is Galα[1→4]Galβ[1→4]Glc.

119. (Previously presented) The recombinant E. coli of claim 117, wherein the oligosaccharide is GalNAcβ[1→3]Galα[1→4]Galβ[1→ 4]Glc.

120. (Previously presented) The recombinant bacterium as in claim 1 wherein said bacterium is *Escherichia coli*.

121. (Cancelled)

122. (Previously presented) The pharmaceutical preparation as in claim 67 wherein said delivery bacterium is *Escherichia coli*.